# Safety

One of the goals of MTC's long-range *Transportation 2030 Plan* is to improve safety for all users of the transportation system — drivers and passengers, transit users, bicyclists and pedestrians.
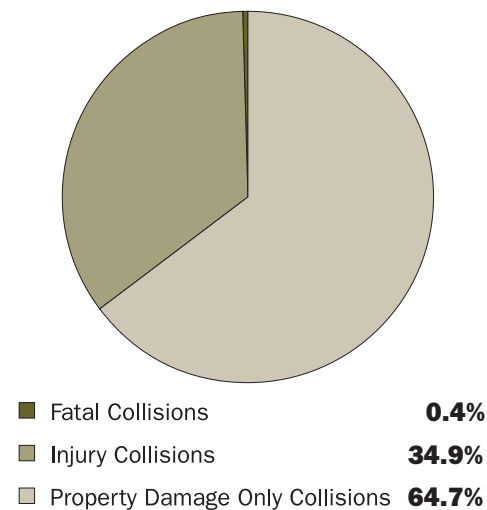
This report uses statistics on injury and fatal collisions to gauge roadway safety. The most widely used safety information on motor vehicle (automobile, truck or motorcycle) collisions with automobiles, bicyclists and pedestrians comes from data assembled by the California Highway Patrol.

In 2002, the Federal Transit Administration shifted to a new reporting system that requires transit operators to submit more frequent and more comprehensive reports on transit safety. While the new requirements promise ultimately to improve the quality of information, the safety statistics collected by FTA during the transition period appear to be incomplete. We have therefore decided not to include data on transit-related injuries and fatalities in the *State of the System 2005* report.

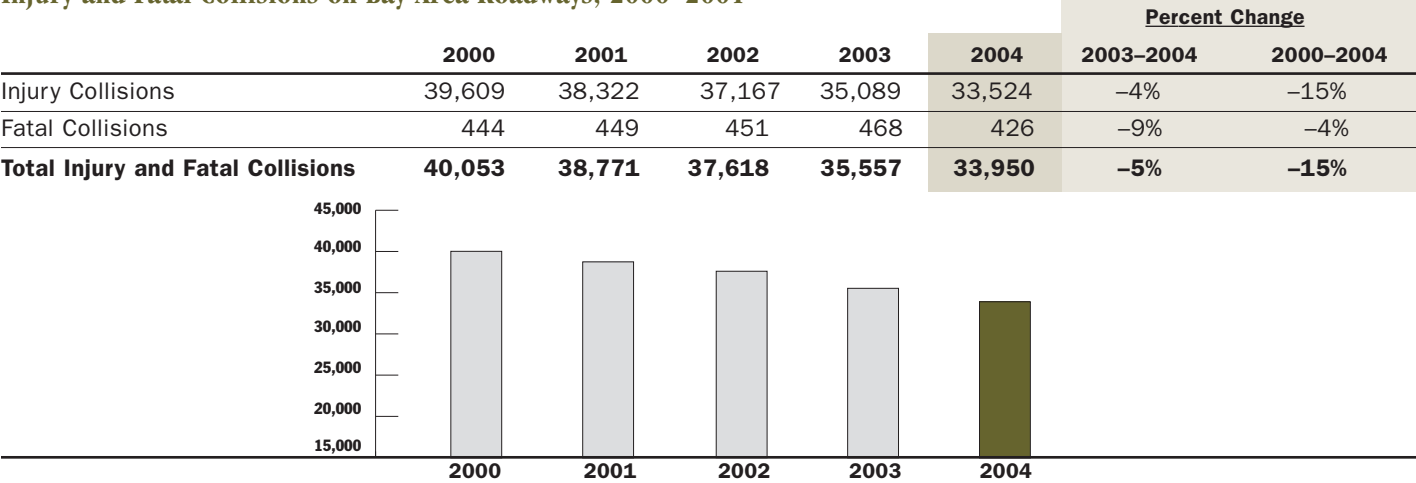# Number of Injury and Fatal Collisions Drops for Fourth Straight Year

- The number of reported injury and fatal motor vehicle collisions in the Bay Area fell 5 percent in 2004, to just under 34,000. This follows a 5 percent decrease in 2003, and marks the fourth straight annual decline in the number of such incidents. The 2004 total is 15 percent lower than the recent high of 40,053 injury and fatal collisions in 2000, and is the lowest of any year in the past 10.

- After increasing each of the prior five years, the number of fatal collisions in 2004 decreased 9 percent to 426.

- Fortunately, most motor vehicle collisions do not result in injuries or fatalities. In 2004, 65 percent of collisions involved property damage only, which is in line with prior years. Approximately 35 percent of collisions resulted in injuries, and less than one-half of one percent caused fatalities.

**Motor Vehicle Collisions in the Bay Area In 2004: Fatal, Injury, Property Damage**



| | |
|---|---|
| ■ Fatal Collisions | **0.4%** |
| ▨ Injury Collisions | **34.9%** |
| ▢ Property Damage Only Collisions | **64.7%** |

Source: California Highway Patrol
96,069 collisions = 100%

## Injury and Fatal Collisions on Bay Area Roadways, 2000–2004

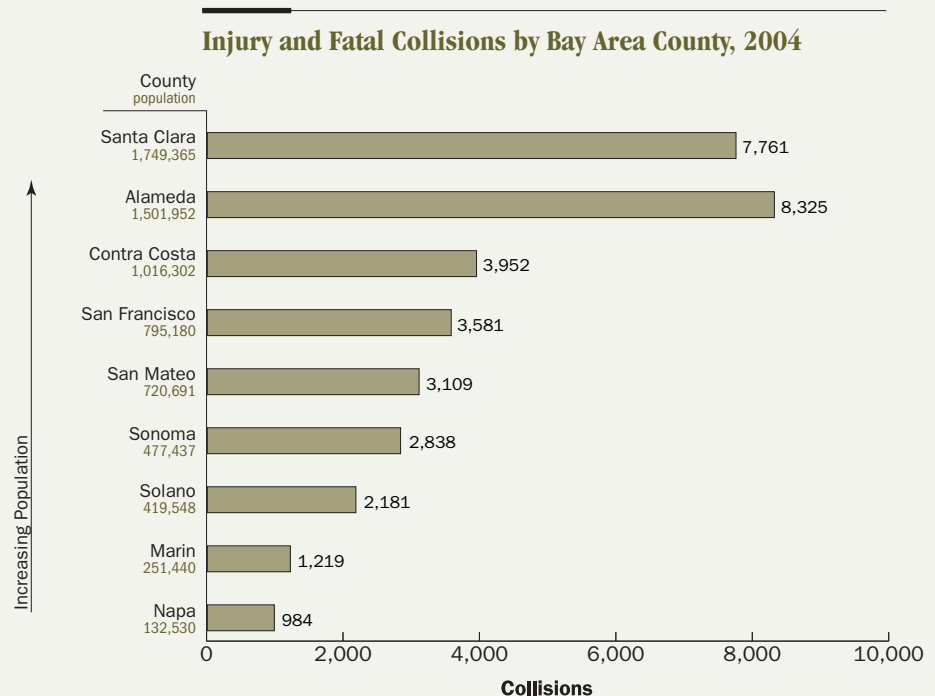| | 2000 | 2001 | 2002 | 2003 | 2004 | Percent Change 2003–2004 | Percent Change 2000–2004 |
|---|---|---|---|---|---|---|---|
| Injury Collisions | 39,609 | 38,322 | 37,167 | 35,089 | 33,524 | −4% | −15% |
| Fatal Collisions | 444 | 449 | 451 | 468 | 426 | −9% | −4% |
| **Total Injury and Fatal Collisions** | **40,053** | **38,771** | **37,618** | **35,557** | **33,950** | **−5%** | **−15%** |



Source: California Highway Patrol

- The 96,069 reported collisions in 2004 represented a 5 percent drop compared to 2003, when 100,751 collisions were reported.
- Several key factors influence the number of collisions. These include: driver education and behavior, vehicle safety features, roadway conditions, traffic congestion and total number of miles driven. Studies suggest that while freeway driving accounts for approximately 60 percent of all miles driven in the Bay Area, only about 25 percent of all collisions occur on freeways.

**A Closer Look –** We can get a rough idea of the geographic distribution of injury and fatal collisions by breaking them out by county of occurrence. In general, a given county's share of collisions correlates closely with its size, as measured by population (see bar graph). The greatest number of collisions occur in Alameda County, though it ranks second to Santa Clara County in terms of population. This is probably explained by the fact that Alameda is a "crossroads" county, within whose borders a significant number of vehicle miles of travel are logged each year — both by its own residents and those from other counties.

**Injury and Fatal Collisions by Bay Area County, 2004**

| County population | Collisions |
|---|---|
| Santa Clara 1,749,365 | 7,761 |
| Alameda 1,501,952 | 8,325 |
| Contra Costa 1,016,302 | 3,952 |
| San Francisco 795,180 | 3,581 |
| San Mateo 720,691 | 3,109 |
| Sonoma 477,437 | 2,838 |
| Solano 419,548 | 2,181 |
| Marin 251,440 | 1,219 |
| Napa 132,530 | 984 |

Increasing Population

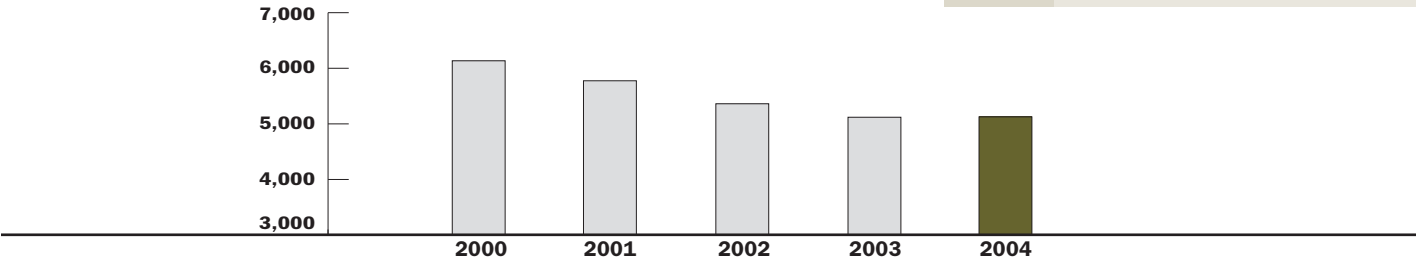Collisions: 0 — 2,000 — 4,000 — 6,000 — 8,000 — 10,000

Sources: California Highway Patrol, California Department of Finance

# Number of Collisions Involving Bicyclists or Pedestrians Holds Steady in 2004, Ending Multi-Year Downward Trend

- The number of injury and fatal motor vehicle collisions involving bicyclists or pedestrians held steady in 2004, with the data showing 5,125 such collisions compared to 5,112 in 2003. This represents a leveling off in a steady downward trend that has been in place since 1999. Indeed, since 2000, double-digit decreases have been recorded in nearly all categories of pedestrian- and bicyclist-involved collisions (see table below).

- An increase of 109 collisions resulting in injury or fatality to cyclists offset a decrease of 96 collisions resulting in injury or fatality to pedestrians. Fatal collisions are five times more likely to involve pedestrians than cyclists,

reflecting the fact that walking is a more common form of transportation than bicycling.

- The 5,125 injury and fatal collisions involving pedestrians or cyclists represent 15 percent of the 33,950 injury and fatal motor vehicle collisions that occurred in 2004 (see previous section). However, the 120 fatal collisions involving pedestrians and cyclists represent a disproportionate 28 percent of all fatal motor vehicle collisions.

- These data include only motor vehicle collisions reported to law-enforcement authorities. There may be a significant number of injury collisions involving pedestrians and cyclists that are not reported.

**Injury and Fatal Motor Vehicle Collisions Involving Pedestrians or Bicyclists, 2000–2004**

| | Collisions | | | | | Percent Change | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2003–2004 | 2000–2004 |
| **Collisions Involving Pedestrians** | | | | | | | |
| Injury Collisions | 3,173 | 3,080 | 2,910 | 2,740 | 2,648 | −3% | −17% |
| Fatal Collisions | 134 | 103 | 111 | 104 | 100 | −4% | −25% |
| Subtotal | 3,307 | 3,183 | 3,021 | 2,844 | 2,748 | −3% | −17% |
| **Collisions Involving Bicyclists** | | | | | | | |
| Injury Collisions | 2,810 | 2,566 | 2,321 | 2,254 | 2,357 | +5% | −16% |
| Fatal Collisions | 17 | 20 | 19 | 14 | 20 | +43% | +18% |
| Subtotal | 2,827 | 2,586 | 2,340 | 2,268 | 2,377 | +5% | −16% |
| **Total Involving Bicyclists or Pedestrians** | **6,134** | **5,769** | **5,361** | **5,112** | **5,125** | **<1%** | **−16%** |

Source: California Highway Patrol

**A Closer Look –** In the absence of better data about how much people are walking and bicycling in the Bay Area, we can look for patterns based on population by jurisdiction. As with data on all collisions, there appears to be a strong correlation between population rank and rank in pedestrian- and bicycle-involved motor vehicle collisions. (For this reason, there is a great deal of consistency from year to year in the jurisdictions with the highest number of pedestrian- and bicycle-involved collisions, with the largest cities — San Francisco, Oakland and San Jose — consistently reporting the highest number of collisions.) Some notable exceptions may be explained by factors such as travel patterns, demographics and daytime population (workers or students).

Berkeley, which is the 16th-largest Bay Area city in terms of population, ranks 4th in the number of pedestrian-involved collisions and 3rd in bicycle-involved collisions. This likely reflects the high level of walking and cycling in this university-centered community. Berkeley also has a higher daytime population due to the university, which attracts large numbers of students and workers. (Similar factors are at work in Palo Alto.)

The city of Vallejo ranks 12th in terms of population and 6th for collisions involving pedestrians. Compared to other Bay Area communities, Vallejo has a greater percentage of youths under 18 and a greater share of persons living in poverty. Both factors tend to correlate with a higher level of pedestrian activity.

## Injury and Fatal Motor Vehicle Collisions Involving Pedestrians And Bicyclists by Bay Area Jurisdiction, 2004

### PEDESTRIANS

| 2004 Rank | Jurisdiction | Total 2004 | Annual Average 1999–2003 | Rank in Population |
|---|---|---|---|---|
| 1 | San Francisco | 730 | 901 | 2 |
| 2 | San Jose | 330 | 347 | 1 |
| 3 | Oakland | 290 | 298 | 3 |
| 4 | Berkeley | 105 | 113 | 16 |
| 5 | Hayward | 64 | 76 | 8 |
| 6 | Vallejo | 62 | 51 | 12 |
| 7 | Santa Rosa | 49 | 56 | 6 |
| 8 | San Mateo | 43 | 46 | 21 |
| 9 | Fremont | 41 | 63 | 4 |
| 10 | Santa Clara | 40 | 28 | 13 |

### BICYCLISTS

| 2004 Rank | Jurisdiction | Total 2004 | Annual Average 1999–2003 | Rank in Population |
|---|---|---|---|---|
| 1 | San Francisco | 323 | 357 | 2 |
| 2 | San Jose | 321 | 300 | 1 |
| 3 | Berkeley | 132 | 136 | 16 |
| 4 | Oakland | 118 | 166 | 3 |
| 5 | Santa Rosa | 63 | 74 | 6 |
| 6 | Palo Alto | 56 | 74 | 35 |
| 7 | Concord | 52 | 46 | 11 |
| 8 | Sunnyvale | 51 | 47 | 10 |
| 9 | Fremont | 48 | 61 | 4 |
| 10 | Napa | 47 | 37 | 24 |

Sources: California Highway Patrol, California Department of Finance

# Appendix C:

# Injury and Fatal Motor Vehicle Collisions Involving Bicyclists and Pedestrians by Bay Area Jurisdiction, 2004

## Injury and Fatal Motor Vehicle Collisions Involving Bicyclists and Pedestrians by Bay Area Jurisdiction, 2004

| JURISDICTION | PEDESTRIAN-INVOLVED COLLISIONS | | | | BICYCLE-INVOLVED COLLISIONS | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL |
| **Alameda County** | | | | | | | | |
| Alameda | 28 | 3 | 31 | 34 | 32 | 0 | 32 | 30 |
| Albany | 9 | 0 | 9 | 7 | 4 | 0 | 4 | 7 |
| Berkeley | 101 | 4 | 105 | 113 | 132 | 0 | 132 | 136 |
| Dublin | 8 | 0 | 8 | 7 | 5 | 0 | 5 | 4 |
| Emeryville | 5 | 1 | 6 | 8 | 4 | 0 | 4 | 5 |
| Fremont | 38 | 3 | 41 | 63 | 47 | 1 | 48 | 61 |
| Hayward | 62 | 2 | 64 | 76 | 39 | 0 | 39 | 51 |
| Livermore | 12 | 0 | 12 | 21 | 29 | 0 | 29 | 33 |
| Newark | 3 | 0 | 3 | 10 | 8 | 1 | 9 | 11 |
| Oakland | 281 | 9 | 290 | 298 | 118 | 0 | 118 | 166 |
| Piedmont | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 2 |
| Pleasanton | 11 | 1 | 12 | 12 | 23 | 0 | 23 | 17 |
| San Leandro | 28 | 2 | 30 | 33 | 23 | 0 | 23 | 21 |
| Union City | 8 | 1 | 9 | 16 | 9 | 0 | 9 | 11 |
| Unincorporated Alameda County | 33 | 3 | 36 | 57 | 33 | 0 | 33 | 37 |
| **Alameda County Total** | **628** | **29** | **657** | **757** | **506** | **2** | **508** | **592** |
| **Contra Costa County** | | | | | | | | |
| Antioch | 18 | 0 | 18 | 21 | 10 | 0 | 10 | 21 |
| Brentwood | 5 | 0 | 5 | 7 | 3 | 0 | 3 | 5 |
| Clayton | 1 | 0 | 1 | 1 | 3 | 0 | 3 | 1 |
| Concord | 36 | 0 | 36 | 41 | 51 | 1 | 52 | 46 |
| Danville | 11 | 0 | 11 | 5 | 11 | 0 | 11 | 11 |
| El Cerrito | 11 | 1 | 12 | 14 | 8 | 0 | 8 | 10 |
| Hercules | 2 | 0 | 2 | 1 | 1 | 0 | 1 | 1 |
| Kensington | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 2 |
| Lafayette | 2 | 0 | 2 | 3 | 2 | 0 | 2 | 5 |
| Martinez | 7 | 0 | 7 | 8 | 4 | 0 | 4 | 7 |
| Moraga | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 2 |
| Oakley | 2 | 0 | 2 | 2 | 2 | 0 | 2 | 3 |

**Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)**

| | PEDESTRIAN-INVOLVED COLLISIONS | | | | BICYCLE-INVOLVED COLLISIONS | | | |
|---|---|---|---|---|---|---|---|---|
| JURISDICTION | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL |
| Orinda | 3 | 0 | 3 | 3 | 1 | 0 | 1 | 3 |
| Pinole | 7 | 2 | 9 | 6 | 3 | 0 | 3 | 3 |
| Pittsburg | 11 | 2 | 13 | 21 | 5 | 0 | 5 | 8 |
| Pleasant Hill | 9 | 0 | 9 | 12 | 20 | 0 | 20 | 19 |
| Richmond | 38 | 0 | 38 | 55 | 20 | 1 | 21 | 32 |
| San Pablo | 14 | 0 | 14 | 22 | 14 | 0 | 14 | 12 |
| San Ramon | 2 | 0 | 2 | 5 | 3 | 0 | 3 | 7 |
| Walnut Creek | 18 | 0 | 18 | 21 | 17 | 2 | 19 | 28 |
| Unincorporated Contra Costa Co. | 30 | 2 | 32 | 36 | 44 | 0 | 44 | 37 |
| **Contra Costa County Total** | **227** | **7** | **234** | **287** | **226** | **4** | **230** | **262** |
| **Marin County** | | | | | | | | |
| Belvedere | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Corte Madera | 2 | 0 | 2 | 3 | 11 | 0 | 11 | 10 |
| Fairfax | 3 | 0 | 3 | 3 | 2 | 0 | 2 | 4 |
| Larkspur | 5 | 0 | 5 | 3 | 4 | 0 | 4 | 6 |
| Mill Valley | 1 | 0 | 1 | 4 | 3 | 0 | 3 | 5 |
| Novato | 15 | 0 | 15 | 15 | 10 | 0 | 10 | 24 |
| Ross | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 1 |
| San Anselmo | 8 | 0 | 8 | 6 | 12 | 0 | 12 | 7 |
| San Rafael | 29 | 0 | 29 | 36 | 37 | 0 | 37 | 37 |
| Sausalito | 0 | 0 | 0 | 3 | 7 | 0 | 7 | 16 |
| Tiburon | 1 | 0 | 1 | 1 | 2 | 0 | 2 | 1 |
| Unincorporated Marin County | 8 | 0 | 8 | 11 | 27 | 0 | 27 | 36 |
| **Marin County Total** | **74** | **0** | **74** | **86** | **115** | **0** | **115** | **148** |
| **Napa County** | | | | | | | | |
| American Canyon | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 3 |
| Calistoga | 1 | 0 | 1 | 3 | 3 | 0 | 3 | 2 |
| Napa | 25 | 1 | 26 | 29 | 47 | 0 | 47 | 37 |
| Saint Helena | 5 | 0 | 5 | 3 | 1 | 0 | 1 | 4 |

**Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)**

| | PEDESTRIAN-INVOLVED COLLISIONS | | | | BICYCLE-INVOLVED COLLISIONS | | | |
|---|---|---|---|---|---|---|---|---|
| JURISDICTION | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL |
| Yountville | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Unincorporated Napa County | 0 | 1 | 1 | 3 | 18 | 0 | 18 | 12 |
| **Napa County Total** | **31** | **2** | **33** | **41** | **71** | **0** | **71** | **58** |
| **San Francisco County** | | | | | | | | |
| **San Francisco County Total** | **710** | **20** | **730** | **901** | **321** | **2** | **323** | **357** |
| **San Mateo County** | | | | | | | | |
| Atherton | 3 | 0 | 3 | 3 | 4 | 0 | 4 | 4 |
| Belmont | 5 | 0 | 5 | 6 | 4 | 0 | 4 | 8 |
| Brisbane | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 1 |
| Burlingame | 12 | 0 | 12 | 16 | 10 | 0 | 10 | 8 |
| Colma | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 1 |
| Daly City | 30 | 2 | 32 | 36 | 8 | 0 | 8 | 10 |
| East Palo Alto | 17 | 0 | 17 | 21 | 11 | 0 | 11 | 13 |
| Foster City | 3 | 0 | 3 | 2 | 5 | 0 | 5 | 5 |
| Half Moon Bay | 1 | 2 | 3 | 3 | 3 | 0 | 3 | 6 |
| Hillsborough | 2 | 0 | 2 | 1 | 1 | 0 | 1 | 2 |
| Menlo Park | 16 | 0 | 16 | 18 | 20 | 0 | 20 | 19 |
| Millbrae | 10 | 2 | 12 | 8 | 2 | 0 | 2 | 3 |
| Pacifica | 5 | 0 | 5 | 9 | 5 | 0 | 5 | 4 |
| Portola Valley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Redwood City | 31 | 4 | 35 | 32 | 28 | 0 | 28 | 40 |
| San Bruno | 14 | 0 | 14 | 19 | 10 | 0 | 10 | 11 |
| San Carlos | 9 | 0 | 9 | 7 | 6 | 0 | 6 | 8 |
| San Mateo | 42 | 1 | 43 | 46 | 42 | 0 | 42 | 48 |
| South San Francisco | 23 | 0 | 23 | 27 | 13 | 0 | 13 | 19 |
| Woodside | 0 | 0 | 0 | 0 | 5 | 1 | 6 | 9 |
| Unincorporated San Mateo Co. | 11 | 2 | 13 | 14 | 30 | 0 | 30 | 36 |
| **San Mateo County Total** | **237** | **13** | **250** | **273** | **207** | **1** | **208** | **256** |

**Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)**

| | PEDESTRIAN-INVOLVED COLLISIONS | | | | BICYCLE-INVOLVED COLLISIONS | | | |
|---|---|---|---|---|---|---|---|---|
| JURISDICTION | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL |
| **Santa Clara County** | | | | | | | | |
| Campbell | 13 | 0 | 13 | 8 | 16 | 0 | 16 | 14 |
| Cupertino | 7 | 0 | 7 | 15 | 21 | 0 | 21 | 31 |
| Gilroy | 17 | 1 | 18 | 11 | 14 | 0 | 14 | 10 |
| Los Altos | 4 | 0 | 4 | 9 | 22 | 0 | 22 | 24 |
| Los Altos Hills | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 6 |
| Los Gatos | 5 | 1 | 6 | 8 | 15 | 0 | 15 | 13 |
| Milpitas | 13 | 0 | 13 | 14 | 18 | 0 | 18 | 19 |
| Monte Sereno | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |
| Morgan Hill | 7 | 0 | 7 | 5 | 9 | 0 | 9 | 7 |
| Mountain View | 26 | 0 | 26 | 21 | 44 | 0 | 44 | 50 |
| Palo Alto | 21 | 0 | 21 | 26 | 56 | 0 | 56 | 74 |
| San Jose | 312 | 18 | 330 | 347 | 318 | 3 | 321 | 300 |
| Santa Clara | 40 | 0 | 40 | 28 | 15 | 0 | 15 | 34 |
| Saratoga | 2 | 1 | 3 | 3 | 19 | 0 | 19 | 14 |
| Sunnyvale | 15 | 0 | 15 | 30 | 51 | 0 | 51 | 47 |
| Unincorporated Santa Clara Co. | 21 | 0 | 21 | 13 | 29 | 3 | 32 | 32 |
| **Santa Clara County Total** | **504** | **21** | **525** | **539** | **650** | **7** | **657** | **676** |
| **Solano County** | | | | | | | | |
| Benicia | 6 | 0 | 6 | 7 | 3 | 0 | 3 | 5 |
| Dixon | 4 | 0 | 4 | 4 | 8 | 0 | 8 | 4 |
| Fairfield | 32 | 0 | 32 | 41 | 37 | 1 | 38 | 36 |
| Rio Vista | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Suisun City | 5 | 0 | 5 | 4 | 1 | 0 | 1 | 6 |
| Vacaville | 15 | 0 | 15 | 13 | 13 | 0 | 13 | 20 |
| Vallejo | 59 | 3 | 62 | 51 | 22 | 0 | 22 | 31 |
| Unincorporated Solano County | 4 | 1 | 5 | 5 | 4 | 0 | 4 | 5 |
| **Solano County Total** | **125** | **4** | **129** | **126** | **89** | **1** | **90** | **107** |

**Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)**

| | PEDESTRIAN-INVOLVED COLLISIONS | | | | BICYCLE-INVOLVED COLLISIONS | | | |
|---|---|---|---|---|---|---|---|---|
| JURISDICTION | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL | 2004 INJURY | 2004 FATAL | 2004 INJURY and FATAL | 1999–2003 ANNUAL AVG. INJURY and FATAL |
| **Sonoma County** | | | | | | | | |
| Cloverdale | 1 | 0 | 1 | 1 | 2 | 0 | 2 | 4 |
| Cotati | 2 | 0 | 2 | 2 | 5 | 0 | 5 | 3 |
| Healdsburg | 4 | 0 | 4 | 2 | 7 | 0 | 7 | 4 |
| Petaluma | 15 | 1 | 16 | 23 | 35 | 0 | 35 | 27 |
| Rohnert Park | 7 | 0 | 7 | 9 | 10 | 0 | 10 | 11 |
| Santa Rosa | 48 | 1 | 49 | 56 | 62 | 1 | 63 | 74 |
| Sebastopol | 7 | 0 | 7 | 6 | 7 | 0 | 7 | 7 |
| Sonoma | 1 | 1 | 2 | 6 | 2 | 0 | 2 | 4 |
| Windsor | 5 | 0 | 5 | 3 | 3 | 0 | 3 | 3 |
| Unincorporated Sonoma County | 22 | 1 | 23 | 25 | 40 | 2 | 42 | 37 |
| **Sonoma County Total** | **112** | **4** | **116** | **134** | **172** | **3** | **175** | **175** |
| | | | | | | | | |
| **Bay Area Total** | **2,648** | **100** | **2,748** | **3,145** | **2,357** | **20** | **2,377** | **2,631** |